

RESUME

EDWARD M. VAN EECKHOUT

<http://www.lanl.gov/orgs/d/d4/personnel/edvan.html>

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Education:

Ph.D., Geo-Engineering, University of Minnesota, Dept. of Civil and Mineral Engrg., 1974
M.S., Geophysical Sciences, University of Chicago, Dept. of Geophysical Sciences, 1968
B. Geol. E., University of Minnesota, Dept. of Civil and Mineral Engrg., 1967

Skills: computer applications in engineering, modeling, simulation, data fusion, image processing, decision analysis and strategic planning, mining engineering, rock mechanics, geological engineering, visualization, remote sensing, desktop publishing and computing on a Macintosh (am webmaster for multiple non-profit organizations, plus some sites at LANL), civil engineering, underground structures, GIS, FORTRAN, engineering economics, finite element analysis, SGI

Work Experience:

Los Alamos National Laboratory, Los Alamos NM 87545, 1985 - present (14 yrs)

Positions Held: Central America Technical Coordinator, Image Processing Team Leader, and Technical Staff Member in *Earth and Environmental Sciences Division*; ETCAP and Environmental Project Leader, Technical Staff Member in *Energy and Environmental Analysis Group of Decision Applications Division*

Responsibilities: Oversaw and coordinated the Earth and Environmental Science Division's Central American projects in geothermal and mineral resource evaluations. Performed technical studies on utilization of classified and unclassified remote sensing resources to characterize environmental waste problems, executed modeling and simulation analyses of environmental and traffic (TRANSIMS) issues, evaluated innovative environmental technologies for their economic merit, and performed other studies involving fiber optics, hydrology, geothermal engineering, geophysics, and geochemistry. Worked with Energy and Sustainable Systems Program Office to promote various modeling and simulation D Division efforts (e.g., NATMAP). Recently have become involved in certification efforts for the W76.

Montana Tech, Butte MT 59701, 1977-1985 (8 yrs)

Positions Held: Associate and Assistant Professor, Mining Dept. (tenure received in 1984), and Assistant Director of the Graduate School

Responsibilities: Developed and taught courses in the Mining Department, plus advised about 30 undergraduate students per year. Courses were focused on rock mechanics, the utilization of computer techniques in engineering, and systems engineering. Consulting during this period included eleven companies, some of which supported graduate students as part of the project (such as FMC in Wyoming, Los Alamos National Lab in New Mexico, and the U.S. Bureau of Mines in the state of Washington). Nine masters students graduated under my direction during this period (Montana Tech has no Ph.D. program). Also served as the Assistant Director of the Graduate School.

U.S. Bureau of Mines, Twin Cities MN 55111, 1976-1977, 1971-1974 (4 yrs total)

Positions Held: The U.S. Bureau of Mines supported my dissertation work on coal mine shales during the early period. I also worked briefly for the Bureau as a mining engineer.

Responsibilities: Completed my dissertation work on moisture effects on coal mine shales. Performed studies on copper-nickel mining in northeastern Minnesota during the latter period.

CONOCO Mining Research, Ponca City OK 74601, 1974-1976, (1+ yrs)

Positions Held: Research Engineer

Responsibilities: Conducted roof control rock mechanics research for Consolidation Coal Co. This involved surface and underground instrumentation of longwall panels, applied laboratory testing, and research into the design of safer openings in coal.

U.S. Army Corps of Engineers, Vietnam and Army District, Buffalo NY, 1968-1970 (2+ yrs)

Positions Held: First and Second Lieutenant; Engineering Geologist

Responsibilities: Served as an Engineer Staff Officer in a consultant capacity on various engineering problems encountered in Vietnam; e.g., placement of water wells and coordination of civilian consulting work. Served as an engineering geologist conducting structural geology surveys, core logging, drill hole placement, and rock mechanics studies on Niagara Falls.

Continuing Education:

Attended numerous short courses through the years. Topics included programming in C, C++, and IDL, Spanish, geostatistics, explosives, computer modeling, and others. I have taught 4 short courses through the years; the most recent involving image processing for environmental characterization (in 1997).

Professional Registration:

Registered Engineer, Montana (5423E)

Membership in Professional Organizations:

Member, Society of Mining Engineers of AIME (1964-present). Held offices of Sec/Treas (1980-84) and Vice Pres (1984-85) of the Montana Section. Also was Pres (1966-67) of the student section at the University of Minnesota.

Member, American Society of Civil Engineers (1988-present).

Member, International Society for Rock Mechanics (1973-present). On organizing committee for the 33rd U.S. Rock Mechanics Symposium in Santa Fe in 1992. On organizing committee for the Time Domain Reflectometry Conf. held in September 1994 at Northwestern Univ.

Member, American Society for Photogrammetry and Remote Sensing (1991-present)

Member, Association for Computing Machinery (1993-present).

Founding Member, American Rock Mechanics Assc. (1994-present)

Member, Tau Beta Pi (1966-present).

Security Clearance:

"Q" clearance, secured by Los Alamos National Lab (1982-present).

"SCI" clearance, secured by Los Alamos National Lab (1992-1999).

Publications (1997-2002):

Toole, G., Van Eeckhout, E., & Hinrichs, M., Nov 2002, "LANL Electric Consumption and Demand: The Past and the Future," Los Alamos National Laboratory Report LA-UR-02-7219, 39 pp.

Van Eeckhout, E., Smith, L., & Henson, K., Aug 2002, "Simulation of Two Traffic Options on a Heavily Traveled Road Adjacent to Los Alamos National Laboratory," Proceedings, 7th International Conference on Applications of Advanced Technology in Transportation (AATT2002), Boston, MA, pp. 648-655.

Toole, G., Van Eeckhout, E., & Hinrichs, M., Dec 2001, "Past and Future LANL Electric Usage: A Ten-Year Forecast," Los Alamos National Laboratory Report LA-UR-01-5542, 32 pp.

DeMuth, S., Harry, J., Van Eeckhout, E. & V. Sturgeon, May 2001, "Requirements for Determination of the Light Duty Utility Arm (LDUA) Cost Savings," Los Alamos National Laboratory Report LA-UR-99-2864, 22 pp.

DeMuth, S., Van Eeckhout, E., Harry, J., & Booth, S., Jun 2001, "ETCAP: Estimating Cost Savings of Innovative Technologies," Poster at 2001 Int Containment & Remediation Technology Conf and Exhibition, Orlando, FL, Los Alamos National Laboratory Report LA-UR-01-2612.

Pope, P., Becker, N., Van Eeckhout, E., Rofer, C., David, N. & Irvine, J., Sep 2000, "Environmental Site Characterization Utilizing Aerial Photographs and Satellite Imagery: Three Sites at Los Alamos National Laboratory, New Mexico," Los Alamos National Laboratory Report LA-UR-00-3781, Paper 139 presented at Spectrum 2000, Chattanooga, TN, 8 pp.

Harry, J., & Van Eeckhout, E., Aug 2000, "Validation of Decontamination and Volume Reduction System (DVRS) Potential Cost Savings at Los Alamos National Laboratory," Los Alamos National Laboratory Report LA-UR-00-3819, 18 pp.

Hardie, R., Thayer, G., Van Eeckhout, E., & Duchane, D., 1999, "Integrated Systems Analysis Applied to Environmental Remediation," Los Alamos National Laboratory Report LA-UR-99-2979, 14 pp.

DeMuth, S., Harry, J., Nastasi, A., & Van Eeckhout, E., Dec 1999, "Summaries of Four Innovative Tank Technologies," Los Alamos National Laboratory Report LA-UR-00-967, 32 pp.

Cummings, M., DeMuth, S., Harry, J., McCown, An, Mutter, B., and E. Van Eeckhout, Oct 1998, "DOE-Developed Environmental Technologies: An Analysis of Cost Savings Complex Wide," Los Alamos National Laboratory Report LA-UR-98-5517, 39 pp.

Shaner, M., Valentine, G., and E. Van Eeckhout, 1997, "Proceedings of the MODSIM'97 USA Workshop," Workshop held in Albuquerque, NM, 22-24 September, 1997, paginated in sections.

Van Eeckhout, E., Lewis, A., Ginsberg, I., Lyon, R., & Geise, D., 1997, "Image Processing for Environmental Characterization," Workshop presented at Twelfth Thematic Conference on Geologic Remote Sensing, 17-19 Nov., 1997, Denver, CO.

Van Eeckhout, E., Oct 1997, "Use of Data Fusion to Optimize Contaminant Transport Predictions, "Los Alamos National Laboratory Report LA-UR-98-845, 16 pp.

Additional Activities:

Member, Sangre de Cristo Chorale (Jan 1986 - present, Pres. (1995-1996; 2001-2002)), Santa Fe, NM.

Member, Los Alamos Rotary Club (Jul 1986 - present, Pres. (1988-89)); named Paul Harris Fellow in 1996

Member, United Church of Los Alamos (Jun 1986 - present, President (1996), Chr. of Ministerial Search Committee (1992), Personnel Board (2000-2003), Elder (1989-1992), Chr. of Elders (1990), At-Large Member, Executive Board (1994-1995))

Coach, 'Y' Basketball Team (Fall 1985), Los Alamos, NM.

Director, Montana Tech Choir (1978-85). This choir was organized under my direction in 1978, and performed at community functions, Christmas and spring concerts, and Commencement exercises during the period indicated.

Significant Faculty Service Committees, Montana Tech:

Chair, Computer Committee (1980-85); Chair, Sponsored Research Committee (1984-85); Member, Faculty Senate (1980-82, 1984-85); Member, Budget Committee (1982-84); Member, Disciplinary Appeals Committee (1979-85)

Member, Butte Rotary Club (1978-86, Pres. (1984-85))

Director, Montana Tech Foundation Board (1984-85)

Trustee, Butte School Board (1983-84)

Cubmaster, Pack No. 15 (1982-83), Butte, MT.

Trustee, St. Anthony Park Congregational Church (1976-77), St. Paul, MN.